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XXII.—*On the Flint Implements recently discovered at Pressigny-le-Grand.* By Professor STEENSTRUP and Sir JOHN LUBBOCK, Bart.

[*Read June 26th, 1866.*]

PRESSIGNY-LE-GRAND, a small French town, hitherto but little known out of its immediate neighbourhood, has suddenly been rendered famous by a discovery of flint implements in unparalleled abundance, and presenting some remarkable peculiarities. Dr. Leveillé, whose kindness and hospitality we must not omit to acknowledge, felt, like many others, deep interest in the progress which had been recently made in the study of pre-historic archæology. Affording one more illustration that men seldom see what they do not look for, he had not until then observed any flint implements in his own neighbourhood; but he now began to search for them, and found, to his astonishment, that his own fields contained them in an abundance of which we have hitherto known no example. We do not propose here to give a detailed account of their exact distribution. It will be sufficient to say that, although they extend over a wide area, they are extremely local. The country round Pressigny is tolerably flat, but it is intersected by numerous small valleys, which either are or have been occupied, and no doubt excavated, by running water. On the sunny slopes of these valleys, near the water, or at least the water-courses, the flint implements are generally found. They occur in abundance only where the blocks of flint are, or were, numerous; and the areas occupied by them have often very well-defined boundaries. In one case we found them in abundance on one side of a little valley, while on the other side of the water-course, which was dry, and not more than a few yards in width, not one was to be seen.

Thus, then, when the facts shall have been thoroughly observed, we shall be able to map out with considerable exactitude the boundaries of the villages or manufactories of the men by whom these flint implements were made.

Another remarkable fact is that, although the same types of flint implements occur throughout, still the different localities vary a good deal in the character of the assemblage which they present.

Thus, as has been already remarked by M. Brouillet, the “*livres de beurre*” and large nuclei, which are so common at La Claisière

and Goujons, are almost entirely wanting at Vendeuivre ; while the manufactories of Nassé and La Pinaudière are principally characterised by lance-heads and hatchets.

One cause, at least, of the extreme abundance of worked flint in the neighbourhood of Pressigny may probably be found in the nature of the flint, which is peculiar, being of a dark yellow colour, and of an uniform, though coarse, texture. It occurs, moreover, in great tabular masses, many of which may still be seen strewn on the surface of the ground.

We found at Pressigny no arrow-heads, nor are there any fragments of bones or of pottery.

The flint implements found at Pressigny may be classified as follows :—

Firstly. Polished stone hatchets, which are not rare in the neighbourhood of Pressigny ; but it must not, we think, be concluded too positively that they belong to the same period as the other flint implements. In the first place, because they do not appear to be more abundant at Pressigny than they are in other parts of France, where they have been sought for with equal perseverance ; and, secondly, because in many cases they have been brought from a distance, and not manufactured on the spot. This is evident because they are not made of the peculiar yellow flint so characteristic of the Pressigny implements. Further observations, however, will be required before we shall be disposed to express any decided opinion as to the relative antiquity of the polished flint hatchets and the other implements, to which the interest of the spot is principally due.

Rude flint implements of the Palæolithic types have also been found in the neighbourhood of Pressigny. Five or six were discovered by M. Le Breton, several are in the collection of Dr. Leveillé, and we ourselves found four during our late visit. Those in the collection of Dr. Leveillé, as well as those found by us, were picked up on the surface ; but those belonging to M. Le Breton appear to have been found *in situ*, and an account of their discovery has been read before the Geological Society of France, by M. Louis Lartet. These rude hatchets are made of the Pressigny flint. The oval type is that which predominates.

Thirdly, flint flakes ; fourthly, scrapers ; fifthly, awls ; sixthly, hammers. These are of the usual forms, and require no special description.

But the most curious and characteristic implements of Pressigny are the “livres de beurre.”

These “livres de beurre” are large blocks of flint from eight to thirteen inches in length, shaped more or less like a boat, with a broad butt at one end, tapering gradually to the other. The form has been obtained by a succession of lateral chips, at right

angles to the longer axis, while generally one or more longitudinal flakes have also been removed.

At first sight they certainly suggest the idea that they are early stages in the manufacture of large axes or some similar instruments, and from their form it has even been suggested that they may have been intended to serve as plough shares. On comparison of a large number, however, and we have had the opportunity of many hundreds, it will be observed that we never meet with any specimens in a more advanced state of manufacture, as would certainly have been the case if this hypothesis was correct. Again, some of them have an original depression in the flint, very greatly reducing the thickness. This would weaken them so greatly as to render such specimens useless for implements; flints of such a form would certainly therefore not have been selected, if strength had been any object. On the other hand, such irregularities would be no disadvantage if the "*livres de beurre*" were, as has been suggested, nuclei prepared with some degree of care in order to give long and regular flakes. We incline then to this theory. Any one who has attempted to make a flint flake will know that it is no easy matter to do so. Long flint flakes were much in demand during the stone age for the manufacture of spear heads, etc., and these "*livres de beurre*" appear to have been the blocks or nuclei from which they were obtained.

In order to ascertain the greatest depth at which these "*livres de beurre*" and the worked flints associated with them occur, we caused to be dug in one of the fields belonging to the farm known as La Claisière, a hole about four feet square. The surface of the ground in this field is literally strewn, as has been already mentioned, with flint implements and chippings. They extend to a depth of about eighteen inches, below which they cease suddenly and altogether. Below this depth we found no flints of the characteristic yellow colour, either worked or unworked. The soil also was of a different hue, and the flints contained in it bore no resemblance to those occurring nearer the surface. In the lower part of the layer containing the worked flints we found also numerous fragments of charcoal. During the night before this visit to La Claisière, and also on the day itself, it fortunately rained very heavily, and one of the ditches at the side of the field was, in consequence, excavated to a greater depth than usual. Here, therefore, we could see, along a line of about a hundred yards, that the flint chips, etc., did not extend to a depth of more than eighteen inches below the surface. It may be said, therefore, that they do not reach to a greater depth than that which is turned up for agricultural processes; for although it is true that the plough does not reach so deep, still it is usual,

when the land is first brought into cultivation, to turn it over to a somewhat greater depth than that which is afterwards considered necessary. We ascertained, by inquiry, that this had actually been the case at La Claisière.

M. Decaisne, the President of the French Academy, has expressed his opinion that the Pressigny worked flints are merely the remains of a manufactory of gun-flints. This hypothesis has as yet but one other supporter, M. Robert, and deserves the attention which it has received only on account of the high position occupied by M. Decaisne. The arguments against it, brought forward by M. Leveillé, M. l'Abbé Bourgeois, M. Penguilly l'Haridon, and M. de Mortillet, appear to be quite satisfactory. According to M. Penguilly l'Haridon, flints were first adapted to the muskets used by the French army in the year 1700, and the regular gun-flints were not introduced until some years afterwards (1719). Although gun-flints are apparently so simple, still there are comparatively few places where flint is found of a texture so homogeneous as to enable the manufacture of them to be carried on economically. There is no reason to suppose that the Pressigny flint, or any resembling it, was ever used in France for gun-flints.

For these reasons, and as the whole history of the manufacture extends back for only a century and a half, we know perfectly well the different localities from which the supplies of gun-flints have been derived. There are only four, and Pressigny is not one of them. There is no tradition in the neighbourhood that gun-flints were ever made there; and Dr. Leveillé has kindly favoured us with the following communication: "M. Malardici, Notaire au Grand Pressigny, ancien président de la chambre des notaires de l'arrondissement de Loches, a lu tous les registres de l'état civil du canton du Grand Pressigny, et une partie des minutes anciennes de ses confrères dans l'arrondissement. Il n'a jamais trouvé sur les registres de l'état civil aucunes personnes prenant le titre de tailleurs de pierres à fusil, ni dans les actes passés à son étude par ses prédécesseurs, ni dans les minutes de ses confrères. J'ai les titres de partages qui ont eu lieu entre les anciens propriétaires de Moizay, et de la Doucetterie, depuis dix huit cent vingt. Ces villages faisaient bien anciennement vingt familles. Je n'ai vu sur les titres personne ne prendre la profession de tailleur de pierre à fusil."

M. de Mortillet also states that worked flints occur in buildings which are at least from three to four hundred years old. We fully accept this statement, though we did not actually verify it ourselves. We certainly observed in one case a nucleus built into the wall of a cottage; but although the proprietor assured us that it was of considerable age, we were not able to obtain

any conclusive information on this point. We regretted this the less, as we made another observation, even more conclusive. In one of the fields near la Claisière stands a fine oak (*chêne noir*), which, at about three feet from the ground, measured 3 metres 12 cents. in diameter.

In a forest near Blois we met with many felled oaks, and had a good opportunity of ascertaining the average diameter of the annual rings. A diameter of 44 cents. gave 130 rings, 45 cents. gave 140 rings, 48 cents. gave 150 rings; and a stem of 1 metre 12 cents. would indicate an age of AT LEAST four to five hundred years.*

It appeared to us, therefore, that an excavation at the foot of this tree would conclusively settle the question whether the flint-flakes, etc., were really the *débris* from a manufactory of gun-flints. They were so numerous all round that, if really older than the tree, and unless the tree had been planted with unusual care, we were sure to find flint-flakes underneath it; which, on the other hand, would clearly be impossible if they were so recent as was supposed by M. Decaisne. We, therefore, dug close to the base of the tree, and found several worked flints, in some cases directly under the bole of the tree, and firmly attached to the wood itself.

This observation appears to set the question entirely at rest; but there are other facts almost equally conclusive. Even M. Decaisne will hardly pretend that the scrapers, awls, and well-worked flint-flakes can have any connection with the manufacture of gun-flints; nor do the "*livres de beurre*" themselves, and the larger flint-flakes, resemble in any way the true *débris* of a gun-flint manufactory. This has been already pointed out, both by M. de Mortillet, by M. l'Abbé Bourgeois, and Mr. John Evans; but, in order to satisfy ourselves more completely, we visited the village of Meunes, where, and where only, I believe, in France, the manufacture of gun-flints still continues on a scale of some magnitude. The nuclei resulting from this manufacture are small and irregular in form, as may be seen from the specimens which we have the honour of exhibiting to the section. No doubt, a certain number of the smaller and simpler flakes will present a great similarity; but there is nothing whatever to be found among the refuse at Meunes in the least resembling the "*livres de beurre*," the large flakes, and other well-worked objects which occur so abundantly at Pressigny. Under these circumstances, I think we may conclude, without hesitation, that the worked flints have not any connection with the

* Dr. Hooker informs me that though there is much variation, still this calculation is on the safe side.

manufacture of gun flints. The hypothesis, indeed, would not have deserved to be treated seriously, but for the high authority of M. Decaisne, although it is the more surprising that he should have adopted so singular a theory without having any sufficient reasons for doing so.

But if it be easy to satisfy oneself that the “livres de beurre,” and the other implements associated with them, do not belong to the gun period, it is more difficult to say to what age they really appertain. There are not, as yet, any sufficient grounds for attributing them to the age of the extinct mammalia: the “livres de beurre” have not yet been found in the drift-beds, either at Pressigny itself or elsewhere.

Nor do we feel disposed to refer them to that period at the close of the Stone Age, when the use of polished stone implements appears to have attained its greatest development. It is true, that a certain number of polished implements, and even of polishing-blocks have been found in the neighbourhood. Of the latter, indeed, the collection of Dr. Leveillé contains one very magnificent specimen. It has been, however, already mentioned that polished flint implements do not appear to be more numerous at Pressigny than in many other parts of France, and that, in very many cases, those found there have been brought from a distance. From these considerations, and from the entire absence of pottery, we are disposed to think—although we would on this point speak with much hesitation—that the characteristic flint implements of Pressigny will not be found to belong to the latest part of the Stone Age. The same reasons, as well as the entire absence of metal, render it, in our opinion, improbable that they belong either to the Bronze or to the Iron Age. The nearest analogues of the “livres de beurre” yet known to us appear to be some of the larger flint blocks found in the peat-bogs and coast-finds of Denmark. And if we are to attribute much weight to the entire absence of pottery, it would seem, in the present state of our knowledge, perhaps more probable that the flint-finds of Pressigny belong to the period illustrated by some of the Danish peat mosses, and of the Dordogne caves, so admirably studied by M. Lartet, and our much-lamented friend, Mr. Christy. If, however, the Pressigny flint-finds belong, indeed, to any part of the Stone Age, then we think that they suggest certain considerations which are devoid neither of interest nor importance.

One of us has endeavoured in a recent work, to show, by the analogy of existing times, that the men of the Stone Age may very probably have attained to a certain degree of civilisation. It is evident that Pressigny was the seat of a very large manufactory of flint implements, which were intended for exportation, which were, we know, actually exported, and which have been

found at very considerable distances. It remains to be ascertained whether they were made by some resident tribe, or whether, like the pipestone quarries of North America, Pressigny was visited from time to time by distant tribes, when they were in want of new flint implements. The former hypothesis seems to us the most probable—firstly, on account of the similarity of type which characterises the “livres de beurre;” and, secondly, because, as far as we are aware, the implements made of Pressigny flint, and found at a distance, are all of good workmanship.

The large number of flint implements found in the Valley of the Somme has excited much surprise. It is quite possible that here also we may have another place of manufacture, resembling, though on a much smaller scale, those of Pressigny. A discovery recently made by M. l'Abbé Bourgeois, if it shall be confirmed by subsequent observations, also tends to raise our ideas as to the degree of civilisation attained by our ancestors in Palæolithic times. In the drift-gravel at Vendôme, near Blois, he has discovered, not only scrapers, flakes, saws, (?) lance-heads, (?) arrow-heads, (?) etc., of the ordinary magnitude, but also a very large number “de très petits instruments qui semblent n'être qu'une imitation, pour ainsi dire, microscopique, des instruments d'une volume ordinaire.”

Similar objects are common among the Esquimaux, by whom they are, or rather were, placed in considerable numbers in the tombs. Here, again, we find illustrations and analogies of our oldest known predecessors in Europe rather in the far North than in the sunnier regions of the East. And what strikes us as being of great interest is the fact that, if these observations shall be confirmed by others, and if the deductions drawn from them are correct, we thus find, in the workshops of Pressigny, in the works of art of the Dordogne, and in the emblematical miniatures of Vendôme, evidence that the inhabitants of Western Europe, even in the Stone Age, possessed some, at least, of the rudiments of civilisation—namely, manufactures showing considerable skill, and by no means on a small scale, and a certain appreciation of art.